Deutsche Bank

Pillar 3 Report as of September 30, 2021

Content

Regulatory framework

Introduction

This Report provides Pillar 3 disclosures for the consolidated Deutsche Bank Group (the Group) as required by the global regulatory framework for capital and liquidity, which was established by the Basel Committee on Banking Supervision, also known as Basel 3.

In the European Union (EU), the Basel 3 framework is implemented by the amended versions of “Regulation (EU) 575/2013 on prudential requirements for credit institutions and investment firms” (Capital Requirements Regulation or “CRR”) and the “Directive (EU) 2013/36 on access to the activity of credit institutions and the prudential supervision of credit institutions and investment firms” (Capital Requirements Directive or “CRD”). As a single rulebook, the CRR is directly applicable to credit institutions and investment firms in the European Union and provides the grounds for the determination of regulatory capital requirements, regulatory own funds, leverage and liquidity as well as other relevant requirements. In addition, the CRD was implemented into German law by means of further amendments to the German Banking Act (“Kreditwesengesetz” or “KWG”) and the German Solvency Regulation (SolvV) and accompanying regulations. Jointly, these laws and regulations represent the regulatory framework applicable in Germany.

The disclosure requirements are provided in Part Eight of the CRR and in Section 26a of the KWG. Further disclosure guidance has been provided by the European Banking Authority (“EBA”) in its “Final draft implementing technical standards on public disclosures by institutions of the information referred to in Titles II and III of Part Eight of Regulation (EU) No 575/2013” (EBA ITS).

The information provided in this Pillar 3 Report is unaudited. Due to rounding, numbers presented throughout this document may not add up precisely to the totals we provide and percentages may not precisely reflect the absolute figures.

Basel 3 and CRR/CRD

Regarding the regulatory minimum capital requirements, the CRR/CRD lays the foundation for the calculation of risk weighted assets (RWA) for credit risk, including counterparty credit risk, credit valuation adjustments, market risk and operational risk.

As a reaction to the COVID-19 outbreak, certain legislative changes to the prudential framework have been made and are applicable since the June 30, 2020 reporting. Regulation (EU) 2020/866 increased the diversification benefit applicable to aggregate additional value adjustments from 50 % to 66 % until year end 2020. Regulation (EU) 2020/873 introduced various changes to the determination of risk weighted assets and the leverage exposure. For example, the risk weights applicable to certain small or medium sized enterprises (SME) are reduced by applying scaling factors depending on the exposure value. With respect to the leverage exposure, for example cash receivables and cash payables are offset where the related regular-way sales and purchases are both settled on a delivery versus payment basis. In addition, certain Euro-based exposures facing Eurosystem central banks may be excluded from the leverage exposure subject to having obtained permission from the European Central Bank. Based on Decision (EU) 2020/1306 of the European Central Bank, the Group was allowed for the first time in the September 30, 2020 reporting to exclude these exposures from the leverage exposure. This exclusion did apply until June 27, 2021. Decision (EU) 2021/1074 of the European Central Bank extends the exemption of certain Euro-based exposures facing Eurosystem central banks until March 31, 2022.

Regulation (EU) 2019/876 and Directive (EU) 2019/878 introduced amendments to the CRR/CRD with various changes to the regulatory framework that are applicable since the June 30, 2021 reporting. A new standardized approach for counterparty credit risk (SA-CCR) is introduced that replaces the mark-to-market method to determine the exposure value for derivatives that are not in scope of the internal model method. In addition, a new framework to determine the risk weight for banking book investments in collective investment undertakings and default fund contributions to central counterparties was introduced. The large exposure framework was modified such that a stricter definition of eligible capital is used. Eligible capital was limited to Tier 1 capital, while previously it was Tier 1 and Tier 2 capital, Tier 2 capital being capped at one third of Tier 1 capital. This effectively reduces the general large exposure limit to 25 % of eligible capital. In addition, a new large exposure limit of 15 % of Tier 1 capital was introduced for exposures between Global Systemically Important Institutions (G-SIIs). At the same time the exposure measure was modified such that for derivatives SA-CCR is applied instead of the internal model method. Moreover, credit risk mitigation techniques became mandatory where credit risk mitigation is applied for RWA purposes, and entails a mandatory substitution of the exposure to the provider of the credit risk mitigation (e.g. to the issuer of the financial collateral).

Regulation (EU) 2021/558 and Regulation (EU) 2021/557 introduced targeted amendments to the securitization framework for securitizations of non-performing exposures and extended the framework of simple, transparent and standardized securitizations to synthetic securitizations. These changes applied for the first time in our June 30, 2021 reporting.

A further core element of the CRR/CRD framework is the development and maintenance of a high-quality capital base which should primarily consist of Common Equity Tier 1 (CET 1) capital. The CET 1 minimum capital requirement applicable to the Group is 4.5 % of risk-weighted assets. In addition to this minimum capital requirement, various capital buffer requirements were phased in starting 2016 and are fully effective from 2019 onwards. Since June 30, 2020, the Group applies the transitional arrangements in relation to IFRS 9 as provided in the current CRR/CRD for all CET 1 measures.

Formerly, intangible assets had to be deducted from CET 1 items. Regulation (EU) 2019/876 and Regulation (EU) 2020/873 state that certain software assets do not have to be deducted from CET 1 items once the related regulatory technical standards came into force. The related regulatory technical standard, Regulation (EU) 241/2014, was amended accordingly and entered into force on December 23, 2020. This amended regulatory technical standard was applied for the first time in our December 31, 2020 reporting. For such software assets, the concept of a prudential amortization was introduced. The regulatory prudent value of these software assets is derived based on their initial IFRS carrying value and then amortized on a straight line basis down to zero. The maximum regulatory amortization period is three years, but if the IFRS amortization period is less (e.g. two years), then the regulatory amortization period will be the same. If the IFRS amortization period is longer than the prudential period, therefore resulting in the IFRS carrying value exceeding the regulatory prudent value, then the difference in value must be deducted from CET 1 items. The regulatory prudent value no longer has to be deducted from CET 1 items, it instead is subject to a 100 % risk weight. The prudential amortization starts on the same date as when the IFRS amortization starts (i.e. when the software is ready for use). Whilst the software is in the development phase, the intangible asset capitalized under IFRS must be fully deducted from CET 1 items. Once the software is ready for use, the value of the intangible asset that was fully deducted from CET 1 items is reinstated and amortized as described above.

We present in this report certain figures based on the CRR definition of own fund instruments on a “fully loaded” basis. We calculate such “fully loaded” figures excluding the transitional arrangements for own fund instruments as provided in the currently applicable CRR/CRD. For CET 1 instruments we do not make use of transitional provisions.

Transitional arrangements are applicable for Additional Tier 1 (AT 1) and Tier 2 (T 2) instruments. Capital instruments issued on or prior to December 31, 2011, that no longer qualify as AT 1 or T 2 instruments under the fully loaded CRR/CRD as currently applicable are subject to grandfathering rules during the transitional period and are being phased out from 2013 to 2022 with their recognition capped at 30 % in 2019, 20 % in 2020 and 10 % in 2021 (in relation to the portfolio eligible for grandfathering which was still in issue on December 31, 2012). The current CRR as applicable since June 27, 2019, provides further grandfathering rules for AT 1 and T 2 instruments issued prior to June 27, 2019. Thereunder, AT 1 and T 2 instruments issued through special purpose entities are grandfathered until December 31, 2021, and AT 1 and T 2 instruments that do not meet certain new requirements that apply since June 27, 2019 are grandfathered until June 26, 2025. Instruments issued under UK law which do not fulfill all CRR requirements after the UK has left the European Union are also excluded from our fully loaded definition. Our CET 1 and RWA figures show no difference between CRR/CRD as currently applicable and fully loaded CRR/CRD based on our definition of “fully loaded”.

Regulation (EU) 2019/876 has introduced a minimum regulatory leverage ratio of 3 % determined as the ratio of Tier 1 capital and the regulatory leverage exposure. The binding leverage ratio is applicable since the June 30, 2021 reporting. The minimum regulatory leverage ratio of 3 % is increased if certain Euro-based exposures facing Eurosystem central banks are excluded from the leverage exposure. This is currently the case based on Decision (EU) 2021/1074 of the European Central Bank. The regulatory leverage exposure is generally determined based on the accounting value as the relevant exposure measure for assets. Specific regulatory exposure measures apply to derivatives, where a modified version of SA-CCR applies, and securities financing transactions (SFT) as well as off balance sheet exposures. The exposure for SFT is determined based on the sum of an asset component and an add-on for counterparty credit risk. When determining the asset component netting of SFT receivables and payables is only allowed where specific conditions are met. The add-on for counterparty credit risk is determined as a net exposure from the transaction towards the institution’s counterparty, taking the securities legs and regulatory netting into account. For off-balance sheet items the leverage exposure is determined based on the credit conversion factors used in the credit risk standardized approach subject to a floor of 10 %. From January 1, 2023 an additional leverage ratio buffer requirement of 50 % of the applicable G-SII buffer rate will apply. It is currently expected that this additional requirement will equal 0.75 %.

The CRR/CRD framework further defines liquidity standards. The Liquidity Coverage Ratio (LCR) aims to measure a bank’s short-term resilience to a severe liquidity stress scenario during a stress period of 30 calendar days. Detailed rules for the calculation of the LCR are set out in the Commission Delegated Regulation 2015/61. The binding minimum liquidity coverage ratio is set to 100 % since 2018.

Regulation (EU) 2019/876 has introduced a minimum Net Stable Funding Ratio (NSFR) of 100 % that requires banks to maintain a stable funding profile in relation to their on and off balance sheet exposures. The NSFR is calculated as the ratio of available stable funding (ASF) divided by required stable funding (RSF) and is applicable since the June 30, 2021 reporting. All liabilities and capital instruments are assigned an ASF weight, while assets and certain off balance sheet positions receive an RSF weight. For example, liabilities with residual maturity above one year and retail deposits receive a high ASF weight. In contrast, short-term liabilities, in particular from financial customers, receive a low ASF weight. On establishing the RSF weights, aside from residual maturity, the quality of the assets as well as their encumbrance plays a key role. High quality liquid assets and short-term securities financing transactions receive low RSF weights, while long-term loans and assets encumbered for more than one year receive a high RSF weight.

There is still uncertainty as to how some of the CRR / CRD rules should be interpreted and there are still related binding Technical Standards, which are either still in preparation or not yet available in its final version. Thus, we will continue to refine our assumptions and models in line with evolution of these regulations, as well as, the industry's understanding and interpretation of the rules. Against this background, current CRR/CRD measures may not be comparable to previous expectations. Also, our CRR/CRD measures may not be comparable with similarly labeled measures used by our competitors as our competitors' assumptions and estimates regarding such implementation may differ from ours.

MREL (SRMR/BRRD) and TLAC (CRR)

Banks in the European Union are required to meet at all times a Minimum requirement for own funds and eligible liabilities ("MREL") which ensures that banks have sufficient loss absorbing capacity in resolution to avoid recourse to taxpayers' money. Relevant laws are the Single Resolution Mechanism Regulation ("SRMR") and the Bank Recovery and Resolution Directive ("BRRD") as implemented through the German Recovery and Resolution Act (Sanierungs- und Abwicklungsgesetz, "SAG").

In addition and as required in the CRR, Global Systemically Important Institutions (G-SIIs) in Europe need to have at least the maximum of 16 % plus the combined buffer requirement of their Risk Weighted Assets (RWA) and 6 % of their Leverage Ratio Exposure (LRE) as Total Loss Absorbing Capacity ("TLAC"). The requirement will increase to the maximum of 18 % of RWA plus the combined buffer requirement and 6.75 % of LRE starting 2022.

Instruments which qualify for MREL and TLAC are own funds (Common Equity Tier 1, Additional Tier 1 and Tier 2) as well as certain eligible liabilities (mainly plain-vanilla unsecured bonds). Instruments qualifying for TLAC need to be fully subordinated to general creditor claims (e.g. senior non-preferred bonds) while this is not required for MREL (e.g. senior preferred bonds). Nevertheless, current and future MREL regulation allows the SRB to also set an additional "subordination" requirement within MREL (but separate from TLAC) against which only subordinated liabilities and own funds can be counted.

MREL is determined by the competent resolution authorities for each supervised bank individually and depending on the preferred resolution strategy. In the case of Deutsche Bank AG, MREL is determined by the Single Resolution Board ("SRB"). While there is no statutory minimum level of MREL, the CRR, SRMR, BRRD and delegated regulations set out criteria which the resolution authority must consider when determining the relevant required level of MREL. Guidance is provided through an MREL policy published annually by the SRB. Any binding MREL ratio determined by the SRB is communicated to Deutsche Bank via the German Federal Financial Supervisory Authority (BaFin).

As communicated by the SRB the next update of Deutsche Bank AG's total MREL and subordinated MREL requirement is expected later in 2021 and will for the first time reflect the legal changes of the banking reform package via amendments to the Single Resolution Mechanism Regulation and the Bank Recovery and Resolution Directive provided in June 2019 with the publication of Regulation (EU) 2019/877 and Directive (EU) 2019/879. This will result in the total MREL and subordinated MREL requirement to be set as a percentage of Risk Weighted Assets (RWA) and Leverage Ratio Exposure (LRE). As of September 30, 2021 Deutsche Bank AG has not yet received the next update of the total MREL and subordinated MREL requirement under the new rules. Consequently we continue to report our existing requirements which are expressed as a percentage of Total Liabilities and Own Funds (TLOF).

ICAAP, ILAAP and SREP

The Internal Capital Adequacy Assessment Process ("ICAAP") as stipulated in Pillar 2 of Basel 3 requires banks to identify and assess risks, maintain sufficient capital to face these risks and apply appropriate risk management techniques to maintain adequate capitalization. Our Internal Liquidity Adequacy Assessment Process ("ILAAP") aims to ensure that sufficient levels of liquidity are maintained on an ongoing basis by identifying the key liquidity and funding risks to which the Group is exposed, by monitoring and measuring these risks, and by maintaining tools and resources to manage and mitigate these risks.

In accordance with Article 97 CRD supervisors regularly review, as part of the Supervisory Review and Evaluation Process ("SREP"), the arrangements, strategies, processes and mechanisms implemented by banks and evaluate: (a) risks to which the institution is or might be exposed; (b) risks the institution poses to the financial system; and (c) risks revealed by stress testing.

New Definition of Default

In the third quarter of 2021 after the ECB approval was received, the Group introduced the new definition of default which consists of two EBA guidelines. One guideline comprises an EBA technical standard regarding the materiality threshold for credit obligations past due (implemented with ECB regulation (EU) 2018/1845) and the second guideline covers the application of the definition of default. Both of these new requirements are jointly referred to below as EBA Guidelines on definition of default. The EBA Guidelines on definition of default replaced the default definition under Basel II and is applied to all key risk metrics throughout this Report, including as a trigger of Stage 3 in our IFRS 9 framework.

Key metrics

Key metrics (Article 447 (a-g) and Article 438 (b) CRR)

In the following table EU KM1 we provide key regulatory metrics and ratios as well as related input components as defined by the amended versions of CRR and CRD. They comprise own funds, RWAs, capital ratios, additional requirements based on SREP, capital buffer requirements, leverage ratio, liquidity coverage ratio and net stable funding ratio.

These are important metrics and form part of our holistic risk management across individual risk types in addition to Deutsche Bank-specific internal risk metrics. Based on this they are fully integrated across strategic planning, risk appetite framework and stress testing concepts and are reviewed and approved by our Management Board at least annually.

EU KM1 – Key metrics

		a	b
	in € m. (unless stated otherwise)	Sep 30, 2021	Jun 30, 2021
	Available own funds (amounts)		
1	Common Equity Tier 1 (CET 1) capital	45,633	45,476
2	Tier 1 capital	53,751	53,595
3	Total capital	61,203	61,128
	Risk weighted exposure amounts		
4	Total risk-weighted exposure amount	350,733	344,945
	Capital ratios (as percentage of risk.weighted exposure amount)		
5	Common Equity Tier 1 ratio (%)	13.0	13.2
6	Tier 1 ratio (%)	15.3	15.5
7	Total capital ratio (%)	17.5	17.7
	Additional own funds requirements based on SREP (as a percentage of risk-weighted exposure amount)		
EU 7a	Additional own funds requirements to address risks other than the risk of excessive leverage (%)	2.5	2.5
	of which:		
EU 7b	to be made up of CET 1 capital (percentage points)	1.4	1.4
EU 7c	to be made up of Tier 1 capital (percentage points)	1.9	1.9
EU 7d	Total SREP own funds requirements (%)	10.5	10.5
	Combined buffer requirement (as a percentage of risk-weighted exposure amount)		
8	Capital conservation buffer (%)	2.5	2.5
EU 8a	Conservation buffer due to macro-prudential or systemic risk identified at the level of a Member State (%)	0.0	0.0
9	Institution specific countercyclical capital buffer (%)	0.0	0.0
EU 9a	Systemic risk buffer (%)	0.0	0.0
10	Global Systemically Important Institution buffer (%)	1.5	1.5
EU 10a	Other Systemically Important Institution buffer (%)	2.0	2.0
11	Combined buffer requirement (%)	4.5	4.5
EU 11a	Overall capital requirements (%)	15.0	15.0
12	CET 1 available after meeting the total SREP own funds requirements	24,376	24,909
	Leverage ratio		
13	Leverage ratio total exposure measure	1,104,816	1,100,432
14	Leverage ratio (%)	4.8	4.8
	Additional own funds requirements to address risks of excessive leverage (as a percentage of leverage ratio total exposure amount)		
EU 14a	Additional own funds requirements to address the risk of excessive leverage (%)	0.0	0.0
EU 14b	of which: to be made up of CET 1 capital (percentage points)	0.0	0.0
EU 14c	Total SREP leverage ratio requirements (%)	3.2	3.2
	Leverage ratio buffer and overall leverage ratio requirement (as a percentage of total exposure measure)		
EU 14d	Leverage ratio buffer requirement (%)	0.0	0.0
EU14e	Overall leverage ratio requirements (%)	3.2	3.2
	Liquidity Coverage Ratio		
15	Total high-quality liquid assets (HQLA) (Weighted value - average)	220,467	221,606
EU 16a	Cash outflows - Total weighted value	212,397	212,712
EU 16b	Cash inflows - Total weighted value	58,515	61,603
16	Total net cash outflows (adjusted value)	153,882	151,109
17	Liquidity coverage ratio (%)	143	147
	Net Stable Funding Ratio		
18	Total available stable funding	592,566	590,835
19	Total required stable funding	483,164	483,982
20	NSFR ratio (%)	123	122[1]

[1] NSFR has been updated for June 30, 2021

Key metrics of own funds and eligible liabilities (Article 447 (h) CRR and Article 45i(3)(a,c) BRRD)

This template provides summary information about Deutsche Bank Group's "Minimum requirement for own funds and eligible liabilities" ("MREL") and its "G-SII Requirement for own funds and eligible liabilities" ("TLAC"). It covers the disclosures required by point (h) of Article 447 CRR and points (a) and (c) of Article 45i (3) BRRD. It has to be disclosed by Deutsche Bank AG as the resolution entity on the basis of the consolidated situation of its resolution group.

EU KM2 – Key metrics - MREL and G-SII Requirement for own funds and eligible liabilities (TLAC)

		Minimum requirement for own funds and eligible liabilities (MREL)		G-SII Requirement for own funds and eligible liabilities (TLAC)	
		a		b	c
	in € m. (unless stated otherwise)	Sep 30, 2021	Jun 30, 2021	Sep 30, 2021	Jun 30, 2021
	Own funds and eligible liabilities, ratios and components				
1	Own funds and eligible liabilities	113,871	113,209	108,721	108,145
EU-1a	Own funds and subordinated liabilities	108,721	108,145	–	–
	Total liabilities and own funds of the resolution group (TLOF)	1,075,044	1,069,315	1,075,044	1,069,315
	Own funds and eligible liabilities as percentage of TLOF	10.59	10.59	10.11	10.11
	of which:				
	Own funds and subordinated liabilities	10.11	10.11	–	–
2	Total risk exposure amount of the resolution group (TREA)	350,733	344,945	350,733	344,945
3	Own funds and eligible liabilities as percentage of TREA	32.47	32.82	31.00	31.35
	of which:				
EU-3a	Own funds and subordinated liabilities	31.00	31.35	–	–
4	Total exposure measure of the resolution group (TEM)	1,104,845	1,100,461	1,104,845	1,100,461
5	Own funds and eligible liabilities as percentage of TEM	10.31	10.29	9.84	9.83
	of which:				
EU-5a	Own funds and subordinated liabilities	9.84	9.83	–	–
6a	Does the subordination exemption in Article 72b(4) of the CRR apply? (5% exemption)	–	–	no	no
6b	Pro-memo item - Aggregate amount of permitted non-subordinated eligible liabilities instruments if the subordination discretion as per Article 72b(3) CRR is applied (max 3.5% exemption)	–	–	0	0
6c	Pro-memo item: If a capped subordination exemption applies under Article 72b (3) CRR, the amount of funding issued that ranks pari passu with excluded liabilities and that is recognized under row 1, divided by funding issued that ranks pari passu with excluded Liabilities and that would be recognized under row 1 if no cap was applied (%)	–	–	0	0
	Minimum requirement for own funds and eligible liabilities (MREL)				
	MREL requirement expressed as percentage of TLOF	8.58	8.58	–	–
	of which:				
	to be met with own funds or subordinated liabilities	6.11	6.11	–	–
EU-7	MREL requirement expressed as percentage of the TREA	–	–	–	–
	of which:				
EU-8	to be met with own funds or subordinated liabilities	–	–	–	–
EU-9	MREL requirement expressed as percentage of TEM	–	–	–	–
	of which:				
EU-10	to be met with own funds or subordinated liabilities	–	–	–	–

As of September 30, 2021 our MREL ratio was 10.59 % as percentage of Total liabilities and own funds (TLOF) compared to a requirement of 8.58 % of TLOF. This means Deutsche Bank has a MREL surplus of € 21.6 billion above its MREL requirement. Our subordinated MREL ratio was 10.11 % as percentage of TLOF compared to a requirement of 6.11 % of TLOF. Our subordinated MREL surplus is € 43.0 billion.

Deutsche Bank AG's total MREL and subordinated MREL requirement is still expressed as percentage of TLOF given the SRB has not yet communicated updated requirements based on the latest amendments of the Single Resolution Mechanism Regulation and the Bank Recovery and Resolution Directive provided in June 2019 with the publication of Regulation (EU) 2019/877 and Directive (EU) 2019/879. These updated requirements are expected for later in 2021 as communicated by the SRB and will be expressed as percentage of the Total Risk Exposure Amount (TREA) and the Total Exposure Measure (TEM).

As of September 30, 2021 our TLAC ratio was 31.00 % as percentage of TREA compared to a requirement of 20.52 % (including 4.52 % combined buffer requirement) resulting in a surplus of € 36.7 billion. TLAC as a percentage of TEM was 9.84 % compared to a requirement of 6.00 % which corresponds to a surplus of € 42.4 billion.

Own funds

Transitional arrangements for mitigating the impact of the introduction of IFRS 9 on own funds

As of June 30, 2020, we applied the transitional arrangements in relation to IFRS 9 as provided in Article 473a CRR to all of our CET 1 measures. The CRR allowed for a phase-in of the CET 1 reduction due to the increase in credit loss allowance, as a result of the implementation of IFRS 9, over a five year period until year end 2022. The transitional provisions were structured such that there is a static component relating to increases of credit loss allowance observed as of January 2018 and a dynamic component relating to credit loss allowance increases observed between January 2018 and the current reporting date.

As per the CRR amendment published on June 26, 2020 the transitional provisions have been modified such that the dynamic component is reset, i.e. it separately covers the periods from January 1, 2018 to January 1, 2020 and the period from January 1, 2020 to the current reporting date, the phase-in period is extended until 2024, and the phase-in percentages are modified. Further, the phase-in period is extended until 2024 and the phase-in percentages are modified.

In addition, the CRR amendment simplifies the implementation of the transitional provisions as the requirement to recalculate the exposure at default (EAD) for each individual credit risk standardized approach (CRSA) exposure taking into account the amounts added back to CET 1 no longer applies. Instead, an additional credit risk RWA amount equal to 100 % times the credit loss allowance for the CRSA portfolio that has not reduced CET 1 due to the application of the transitional provisions is determined. The same amount is included in the leverage exposure. We do make use of this simplification in our application of transitional provisions.

The capital add back as of September 30, 2021 of € 29.1 million is only driven by the static component solely stemming from the CRSA portfolio due to the increase in credit loss allowances for the CRSA portfolio at transition from IAS 39 to IFRS 9 at the end of 2017 and beginning of 2018. There was no contribution from the IRBA portfolios, given the regulatory expected loss exceeded IFRS 9 Credit Loss Allowances for the relevant reporting dates.

There is no contribution from the dynamic component for both CRSA and IRBA portfolios which compares credit loss allowance levels between January 1, 2018 and the reporting date. This is due to a reduction in credit loss allowance levels in aforementioned period for the CRSA portfolio and the regulatory expected loss exceeding the credit loss allowance levels for the IRBA portfolio.

The impact of the € 29.1 million capital add back as of September 30, 2021 on our CET 1, Tier 1 and Total Capital as well as risk weighted assets and leverage exposure did not lead to a material change of the related ratios. Template 'IFRS 9-FL: Comparison of institutions' own funds and capital and leverage ratios with and without the application of transitional arrangements for IFRS 9 or analogous ECLs" is not being disclosed due to immateriality.

Capital requirements

Overview of capital requirements (Article 438 (d) CRR)

The table below shows RWA broken down by risk types and model approaches compared to the previous quarter end. It also shows the corresponding own fund requirements, derived from the RWA by an 8 % capital ratio.

EU OV1 – Overview of RWA

		Sep 30, 2021		Jun 30, 2021	
		a	c1	b	c2
	in € m.	RWA	Minimum capital requirements	RWA	Minimum capital requirements
1	Credit risk (excluding CCR)	206,686	16,535	198,572	15,886
	of which:				
2	The standardized approach (SA)	20,393	1,631	19,962	1,597
3	The foundation IRB (FIRB) approach	1,849	148	1,885	151
4	Slotting approach	819	66	1,119	90
EU 4a	Equities under the simple riskweighted approach	10,652	852	10,834	867
5	The advanced IRB (AIRB) approach	172,974	13,838	164,772	13,182
6	Counterparty credit risk (CCR)	32,309	2,585	32,267	2,581
	of which:				
7	The standardized approach	2,400	192	3,168	253
8	Internal model method (IMM)[1]	19,768	1,581	20,651	1,652
EU 8a	Risk exposure to a CCP	607	49	596	48
EU 8b	Credit Valuation Adjustment (CVA)	6,537	523	6,031	483
9	Other CCR[1]	2,997	240	1,821	146
15	Settlement risk	17	1	15	1
16	Securitization exposures in the banking book (after the cap)	11,798	944	11,595	928
	of which:				
17	SEC-IRBA approach	7,043	563	7,003	560
18	SEC-ERBA (including IAA)	541	43	519	41
19	SEC-SA approach	4,013	321	3,779	302
EU 19a	1250% / deduction	201	16	295	24
20	Market risk	21,872	1,750	22,065	1,765
	of which:				
20	Standardized approach	3,164	253	3,053	244
21	IMA	18,708	1,497	19,012	1,521
EU 22a	Large exposures	0	0	0	0
23	Operational risk	64,613	5,169	66,816	5,345
	of which:				
EU 23a	Basic indicator approach	0	0	0	0
EU 23b	Standardized approach	0	0	0	0
EU 23c	Advanced measurement approach	64,613	5,169	66,816	5,345
24	Amounts below the thresholds for deduction (subject to 250% risk weight)	13,437	1,075	13,615	1,089
29	Total	**350,733**	**28,059**	344,945	27,596

[1] Values for Internal model method (IMM) and Other CCR for June 30, 2021 have been updated.

Our RWA were € 350.7 billion as of September 30, 2021, compared to € 344.9 billion as of June 30, 2021. The increase of € 5.8 billion was primarily driven by credit risk (excluding CCR), which was partially offset by operational risk and market risk RWA. The increase in credit risk RWA (excluding CCR) by € 8.1 billion resulted primarily from the introduction of the new EBA Guidelines on definition of default, business growth within our Private Bank, Corporate Bank and Investment Bank as well as foreign exchange movements. This was partially offset by RWA decreases within our Capital Release Unit and Corporate & Other as well as de-risking initiatives within our Investment Bank. The RWA increases were partly offset by decreased operational risk RWA by € 2.2 billion resulting from a lower internal loss frequency, partly offset by parameter recalibration. The market risk RWA reduced by € 0.2 billion benefitting from the lower regulatory VaR and SVaR multiplier as approved by ECB in September 2021, partly offset by an increase in IRC stemming from government bonds.

The movements of RWA for the specific risk types are discussed further down in this report for credit risk in section “Development of credit risk RWA (Article 438 (h) CRR)” on page 11, for counterparty credit risk in section “CCR exposures development (Article 438 (h) CRR)” on page 12 and for market risk in section “Development of market risk RWA (Article 438 (h) CRR)” on page 13.

Credit risk exposure and credit risk mitigation in the internal-rating-based approach

Development of credit risk RWA (Article 438 (h) CRR)

The following table provides an analysis of key drivers for RWA movements observed for credit risk, excluding counterparty credit risk, to the extent covered in IRB approaches in the current and previous reporting period.

EU CR8 – RWA flow statement of credit risk exposures under the IRB approach

		Three months ended Sep 30, 2021	Three months ended Jun 30, 2021
		a	a
	in € m.	RWA	RWA
1	Risk weighted exposure amount as at the end of the previous reporting period	**167,777**	157,285
2	Asset size	444	(2,809)
3	Asset quality	(1,770)	(999)
4	Model updates	16	(102)
5	Methodology and policy	7,883	14,759
6	Acquisitions and disposals	0	250
7	Foreign exchange movements	1,292	(608)
8	Other	0	0
9	Risk weighted exposure amount as at the end of the reporting period	**175,642**	167,777

Organic changes in our portfolio size and composition are considered in the category “asset size”. The category “asset quality” represents the effects from portfolio rating migrations, loss given default, model parameter recalibrations as well as collateral coverage and netting activities. “Model updates” include model refinements and further roll out of advanced internal models. RWA movements resulting from externally, regulatory-driven changes, e.g. applying new regulations, are considered in the “methodology and policy” section. “Acquisition and disposals” show significant exposure movements which can be clearly assigned to acquisition or disposal related activities. Changes that cannot be attributed to the above categories are reflected in the category “other”.

The increase in RWA for credit risk exposures under the IRB approach of 4.7 % or € 7.9 billion since June 30, 2021 is primarily observed in the “methodology and policy” category which includes impacts resulting from the introduction of the EBA Guideline on definition of default. Additionally, the increase in the category “asset size” reflects growing client demand within the Private Bank, Corporate Bank and Investment Bank, partly offset by lower RWA in Corporate & Other as well as de-risking initiatives within our Investment Bank. Moreover, a marginal increase in the category “model updates” reflects further improvements of our internal models. More increases result from FX related credit risk RWA movements. This is offset by the category “asset quality” which reflects a RWA decrease stemming particularly from improved counterparty ratings as well as favorable parameter developments.

Counterparty credit risk (CCR)

CCR exposures development (Article 438 (h) CRR)

The following table provides an analysis of key drivers for RWA movements observed for counterparty credit risk (CCR) exposures calculated under the internal model method (IMM) in the current and previous reporting period.

EU CCR7 – RWA flow statement of counterparty credit risk exposures under the internal model method

		Three months ended Sep 30, 2021	Three months ended Jun 30, 2021
		a	a
	in € m.	RWA	RWA
1	Counterparty credit risk RWA under the IMM opening balance	**20,758**	18,383
2	Asset size	(1,241)	(248)
3	Credit quality of counterparties	63	(229)
4	Model updates (IMM only)	125	0
5	Methodology and policy (IMM only)	0	2,959
6	Acquisitions and disposals	0	0
7	Foreign exchange movements	188	(107)
8	Other	0	0
9	Counterparty credit risk RWA under the IMM closing balance	**19,894**	20,758

Organic changes in our portfolio size and composition are considered in the category “asset size”. The category “credit quality of counterparties” represents the effects from portfolio rating migrations, loss given default, model parameter recalibrations as well as collateral coverage and netting activities. “Model updates (IMM only)” include model refinements and further roll out of our advanced internal models. RWA movements resulting from externally, regulatory-driven changes, e.g. applying new regulations, are considered in the “methodology and policy (IMM only)” section. “Acquisition and disposals” shows significant exposure movements which can be clearly assigned to or acquisition or disposal related activities. Changes that cannot be attributed to the above categories are reflected in the category “other”.

The RWA for counterparty credit risk exposures under the IMM decreased by 4.2 % or € 0.9 billion since June 30, 2021. The decrease in “asset size” reflects reduced IMM-exposure and termination of trades within our Investment Bank and Capital Release Unit. This was partly offset by the increase in the category “model updates” which reflects further improvements of our internal models. Moreover, increases result from FX related credit risk RWA movements.

Market risk

Own funds requirements for market risk under the IMA

Development of market risk RWA (Article 438 (h) CRR)

The following table EU MR2-B provides an analysis of key drivers for movements observed for market risk RWA covered by internal models (i.e. value-at-risk, stressed value-at-risk, incremental risk charge and comprehensive risk measure) in the current and previous reporting period. It also shows the corresponding movements in capital requirements, derived from RWA with an 8 % capital ratio.

EU MR2-B – RWA flow statements of market risk exposures under the IMA

		Three months ended Sep 30, 2021						
		a	b	c	d	e	f	g
	in € m.	VaR	SVaR	IRC	Compre-hensive risk measure	Other	Total RWA	Total capital requirements
1	Market Risk RWA opening balance[1]	4,066	10,034	4,913	–	0	19,013	1,521
1a	Regulatory adjustment[2]	(3,240)	(6,472)	0	–	0	(9,712)	(777)
1b	RWA at the previous quarter-end (end of the day)[3]	826	3,561	4,913	–	0	9,301	744
2	Movement in risk levels	(36)	(632)	2,035	–	0	1,368	109
3	Model updates/changes	0	0	0	–	0	0	0
4	Methodology and policy	0	0	0	–	0	0	0
5	Acquisitions and disposals	0	0	0	–	0	0	0
6	Foreign exchange movements	0	0	0	–	0	0	0
6a	Market data changes and recalibrations	0	0	0	–	0	0	0
7	Other	0	0	0	–	0	0	0
8a	RWA at the end of the reporting period (end of the day)[3]	791	2,930	6,948	–	0	10,669	853
8b	Regulatory adjustment[2]	2,272	5,751	0	–	0	8,023	642
8	Market Risk RWA closing balance[1]	3,063	8,681	6,948	–	0	18,692	1,495

[1] Represents RWA at previous and current reporting period quarter end.
[2] Indicates the difference between RWA and RWA (end of day) at the beginning and end of period.
[3] For a given component (e.g. VaR) it refers to the RWA that would be computed if the previous or current quarter end snapshot figure of the component determines the quarter end RWA, as opposed to a 60-day average for regulatory purposes.

		Three months ended Jun 30, 2021						
		a	b	c	d	e	f	g
	in € m.	VaR	SVaR	IRC	Compre-hensive risk measure	Other	Total RWA	Total capital requirements
1	Market Risk RWA opening balance[1]	8,054	6,157	6,073	–	0	20,285	1,623
1a	Regulatory adjustment[2]	(5,956)	(4,051)	(478)	–	0	(10,485)	(839)
1b	RWA at the previous quarter-end (end of the day)[3]	2,098	2,106	5,595	–	0	9,799	784
2	Movement in risk levels	(32)	719	(682)	–	0	4	515
3	Model updates/changes	68	(196)	0	–	0	(129)	(10)
4	Methodology and policy	0	0	0	–	0	0	0
5	Acquisitions and disposals	0	0	0	–	0	0	0
6	Foreign exchange movements	0	0	0	–	0	0	0
6a	Market data changes and recalibrations	(1,307)	933	0	–	0	(374)	(509)
7	Other	0	0	0	–	0	0	0
8a	RWA at the end of the reporting period (end of the day)[3]	826	3,561	4,913	–	0	9,300	744
8b	Regulatory adjustment[2]	3,240	6,472	0	–	0	9,712	777
8	Market Risk RWA closing balance[1]	4,066	10,034	4,913	–	0	19,012	1,521

[1] Represents RWA at previous and current reporting period quarter end.
[2] Indicates the difference between RWA and RWA (end of day) at the beginning and end of period.
[3] For a given component (e.g. VaR) it refers to the RWA that would be computed if the previous or current quarter end snapshot figure of the component determines the quarter end RWA, as opposed to a 60-day average for regulatory purposes.

The market risk RWA movements due to position changes are represented in line "Movement in risk levels". Changes to our market risk RWA internal models, such as methodology enhancements or risk scope extensions, are included in the category of "Model updates/changes". In the "Methodology and policy" category we reflect regulatory driven changes to our market risk RWA models and calculations. Significant aquisitions and disposals would be assigned to the line item "Acquisition and disposals". The impacts of "Foreign exchange movements" are not calculated for IMA (Internal Models Approach) components.

Changes in market data levels, volatilities, correlations, liquidity and ratings are included under the "Market data changes and recalibrations" category.

As of September 30, 2021, the IMA components for market risk totaled €18.7 billion, which was a decrease of € 0.3 billion since June 30, 2021. The changes in value-at-risk and stressed value-at-risk components were predominantly impacted by reduction in capital multiplier from 4.5 to 4, based on closure of audit findings from Joint Supervisory Team (JST) on Historical Simulation VaR. The ECB approval was received on September 9, 2021, the RWA impact is captured under regulatory adjustment which decreased from 1a at the start of the reporting period to 8b at the end of the reporting period. The increase in Incremental Risk Charge is due to increase in sovereign Japan exposure on the last day of the period.

Liquidity risk (Article 451a CRR)

Qualitative information on LCR (EU LIQB)

The Liquidity Coverage Ratio (LCR)

The LCR is intended to promote the short-term resilience of a bank's liquidity risk profile over a 30 day stress scenario. The ratio is defined as the amount of High Quality Liquid Assets ("HQLA") that could be used to raise liquidity, measured against the total volume of net cash outflows, arising from both contractual and modelled exposures, in a stressed scenario.

This requirement has been implemented into European law, via the Commission Delegated Regulation (EU) 2015/61, adopted in October 2014. Compliance with the LCR was required in the EU from October 1, 2015.

Our average LCR of 143 % (twelve months average) has been calculated in accordance with the Commission Delegated Regulation (EU) 2015/61 and the EBA Guidelines on LCR disclosure to complement the disclosure of liquidity risk management under Article 435 CRR.

The Group's Liquidity Coverage Ratio (LCR) was 137 % as of September 30, 2021, or € 59 billion of excess over the regulatory minimum of 100 %. This compares to 145 %, or € 66 billion of excess liquidity at December 31, 2020. The decrease in surplus was primarily driven by higher outflows for commitments and an increase in German lending activity which was broadly offset by additional participation in the ECB's TLTRO as well as an increases in deposits.

Concentration of funding and liquidity sources

Diversification of our funding profile in terms of investor types, regions and products is an important element of our liquidity risk management framework. Our most stable funding sources for which the Bank has introduced a minimum risk appetite stem from capital markets issuances and equity, as well as from retail, and transaction banking clients. Other customer deposits and secured funding and short positions are additional sources of funding. Unsecured wholesale funding represents unsecured wholesale liabilities sourced primarily by our Treasury Pool Management team. Given the relatively short-term nature of these liabilities, they are predominantly used to fund liquid trading assets.

To promote the additional diversification of our refinancing activities, we hold a license to issue mortgage Pfandbriefe. We continue to run a program for the purpose of issuing Covered Bonds under Spanish law (Cedulas) and participate in the TLTRO III program. Additionally, we expanded in 2020 our potential investor base by introducing our Sustainable Finance Framework and issued a Green Bond in June 2020.

Unsecured wholesale funding comprises a range of institutional products, such as Certificate of Deposits (CDs), Commercial Papers (CPs) as well as Money Market deposits.

To avoid any unwanted reliance on these short-term funding sources, and to promote a sound funding profile which complies with the defined risk appetite, we have implemented limits (across tenors) on these funding sources which are derived from our daily stress testing analysis. In addition, we limit the total volume of unsecured wholesale funding to manage the reliance on this funding source as part of the overall funding diversification.

Composition of HQLA

The average HQLA of 220 billion has been calculated in accordance with the Commission Delegated Regulation (EU) 2015/61 and the EBA Guidelines on LCR disclosure to complement the disclosure of liquidity risk management under Article 435 CRR.

The HQLA as of September 30, 2021 of 217 billion is primarily held in Level 1 cash and central bank reserves (80 %) and Level 1 high quality securities (18 %). This compares to 213 billion as of December 31, 2020 primarily held in Level 1 cash and central bank reserves (67 %) and Level 1 high quality securities (30 %).

Derivative exposures and potential collateral calls

The majority of outflows related to derivative exposures and other collateral requirements shown in item 11 are in relation to derivative contractual cash outflows that are offset by derivative cash inflows shown in item 19 Other cash inflows.

Other significant outflows relate to the impact of an adverse market scenario on derivatives based on the 24 month historical look back approach and the potential posting of additional collateral as a result of a 3 notch downgrade of DB's credit rating (as per regulatory requirements).

Currency mismatch in the LCR

The LCR is calculated for EUR, USD and GBP which have been identified as significant currencies (having liabilities > 5 % of total group liabilities excluding regulatory capital and off balance sheet liabilities) in accordance with the Commission Delegated Regulation (EU) 2015/61. No explicit LCR risk appetite is set for the significant currencies. However, limits have been defined over the respective significant currency stressed Net Liquidity Position (sNLP). This allows the internal monitoring and management of risks stemming from currency mismatches that may arise from liquidity inflows and outflows over the short-term horizon.

Other items in the LCR calculation that are not captured in the LCR disclosure template but that the institution considers relevant for its liquidity profile

The Pillar 3 disclosure obligations require Banks to disclose the 12 months rolling averages each quarter. We do not consider anything else relevant for disclosure.

Quantitative information on LCR

EU LIQ1 – LCR disclosure template

	in € b.	Total unweighted value (average)				Total weighted value (average)			
	Quarter ending on	Sep 30, 2021	Jun 30, 2021	Mar 31, 2021	Dec 31, 2020	Sep 30, 2021	Jun 30, 2021	Mar 31, 2021	Dec 31, 2020
	Number of data points used in the calculation of averages	12	12	12	12	12	12	12	12
	High-quality liquid assets								
1	Total high-quality liquid assets (HQLA)	–	–	–	–	220	222	214	207
	Cash-outflows								
2	Retail deposits and deposits from small business costumers	281	279	274	249	17	17	17	16
	of which:								
3	Stable deposits	116	114	112	109	6	6	6	5
4	Less stable deposits	81	82	80	78	11	11	11	11
5	Unsecured wholesale funding	222	216	215	215	95	91	91	90
	of which:								
6	Operational deposits (all counterparties) and deposits in network of cooperative banks	82	83	83	83	20	21	21	21
7	Non-operational deposits (all counterparties)	137	132	130	130	73	69	68	68
8	Unsecured debt	2	2	2	2	2	2	2	2
9	Secured wholesale funding	–	–	–	–	19	19	18	17
10	Additional requirements	200	200	198	200	69	73	75	77
	of which:								
11	Outflows related to derivative exposures and other collateral requirements	28	32	35	38	25	30	34	37
12	Outflows related to loss of funding on debt products	0	0	0	0	0	0	0	0
13	Credit and liquidity facilities	172	168	162	162	44	43	40	40
14	Other contractual funding obligations	51	47	45	42	7	6	6	6
15	Other contingent funding obligations	142	127	113	111	5	6	6	6
16	Total cash outflows	–	–	–	–	212	213	213	212
	Cash - inflows								
17	Secured lending (e.g. reverse repos)	265	251	240	238	17	18	17	16
18	Inflows from fully performing exposures	44	42	41	43	31	30	30	32
19	Other cash inflows	13	18	22	25	13	18	22	25
EU 19a	Difference between total weighted inflows and total weighted outflows arising from transactions in third countries where there are transfer restrictions or which are denominated in non-convertible currencies	–	–	–	–	3	4	5	6
EU 19b	Excess inflows from a related specialized credit institution	–	–	–	–	0	0	0	0
20	Total cash inflows	322	310	303	305	59	62	64	67
	of which:								
EU 20a	Fully exempt inflows	0	0	0	0	0	0	0	0
EU 20b	Inflows subject to 90 % cap	0	0	0	0	0	0	0	0
EU 20c	Inflows subject to 75 % cap	290	281	277	283	59	62	64	67
	Total adjusted value								
21	Liquidity buffer	–	–	–	–	220	222	214	207
22	Total net cash outflows	–	–	–	–	154	151	149	146
23	Liquidity coverage ratio (%)	–	–	–	–	143	147	144	142

List of tables